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ABSTRACT

This study tested the effectiveness of the Four-H TV Action series broadcast over several Wisconsin commercial stations for school children in grades 4-6. Data were sought on patterns of participation, effects of related classroom activities and personal maturity on learning, and the extent to which youth can learn about emergency preparedness through television. In addition to broadcasts in 16 western Wisconsin counties beginning in January 1967, the program was televised on Saturday mornings in the fall by commercial stations in Green Bay, Rhinelander, and Wausau. Teachers in LaCrosse County administered pretests and posttests and agreed to discuss each program in class and to have the students complete the suggested projects. (Teacher responses and university extension agent reactions included data from a much wider area.) These were among the conclusions reached: (1) university extension can use educational television (ETV) effectively with grade 4-6 children during nonschool time; (2) they will view ETV and learn from it; (3) grade 4 pupils like the program better than grade 5 or 6 pupils, but the latter learn more; (4) supplementary classroom activities tend to increase learning; (5) teachers respond favorably to ETV programs and will use them. (LY)

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EVALUATION OF EDUCATIONAL TELEVISION IN UNIVERSITY EXTENSION YOUTH PROGRAMMING

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TABLE OF CONTENTS

	Page
INTRODUCTION	1
PROBLEM AND OBJECTIVES	1
UTILIZATION OF TELEVISION IN EDUCATION	2
Scope	2
Potential	2
EVALUATION	3
School Cooperation and Participation	3
Student Viewing	3
An Experimental Design to Measure Learning	3
Student Learning	5
STUDENT RESPONSE	8
Student Rating of Programs	8
Student Ratings of Membership Cards and Pins	8
TEACHER RESPONSE	9
Teacher Opinions of Content	9
Teacher Opinions of Student Interest	9
Teachers and Classroom Activity	9
Teachers and Discussion Guides	11
General Comments and Recommendations for Teachers	11
ASSESSMENT BY UNIVERSITY EXTENSION PERSONNEL	11
CONCLUSIONS	12
SELECTED BIBLIOGRAPHY	13

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EVALUATION OF EDUCATIONAL TELEVISION IN UNIVERSITY EXTENSION YOUTH PROGRAMMING

John F. Thompson, Sidney R. Bjorkman and Norman O. Everson*

INTRODUCTION

This study is an evaluation of television effectiveness when used in Extension Youth Programs. In January 1967, University Extension, University of Wisconsin, initiated broadcast of the 4-H TV Action program on two commercial television stations. This program is designed for upper elementary school age students.

This report covers a systematic evaluation of the 4-H TV Action series in La Crosse County. School officials in that county agreed to have the content of the series added to their curriculum in the fourth, fifth and sixth grades. Al Becker, 4-H and Youth agent in La Crosse County, contacted all the teachers of these grades and explained the program to them. The teachers agreed to administer pre and post tests and were urged to discuss the programs the following day in class and to have the students complete the suggested projects. Nearly all of the data reported here were obtained through the evaluative efforts in La Crosse County. Teacher responses and University Extension Agent reactions include data from a much larger geographic area.

Sidney R. Bjorkman designed the instruments, coordinated their administration, and tabulated results. John F. Thompson directed the evaluation, and Norman O. Everson served as liaison with University Extension 4-H and Youth Agents and television stations in implementation of the 4-H TV Action program.

PROBLEM AND OBJECTIVES

A television set now occupies a spot in nearly every American home and in most schools within range of a television station. A flick of the switch emits a combined verbal and visual exposure to world events, drama, light entertainment, sporting events, cartoons, televised instruction and many other types of programs.

Utilization of television in education has been highly praised, damned, misused and made the subject of much flamboyant propaganda, both pro and con. Diamond (3, p. 194) contends much of the discussion has missed the point: in reality the effectiveness of television depends upon what is televised and how it is applied, for the medium is simply a means of transmission and nothing more.

Television in education should be defined as a medium of instruction and be treated as such. Television should be given the same consideration as is given to textbooks, workbooks, motion pictures, phonograph records, and radio. These are all media for imparting knowledge to the learner. They can be effective or ineffective, depending upon how they are used and who uses them.

The multitude of research conducted the past fifteen years indicates there is little or no difference in learning outcomes when comparing televised instruction in the schools and conventional classroom instruction, but what about the use of television in informal out of school programs as an educational approach for teaching youth? What is the potential of television in this type of 4-H programming?

The problem of this study is stated by a series of questions about the effectiveness of the 4-H TV Action program:

a. Do youth learn about emergency preparedness by viewing the television programs?

b. What is the pattern of participation in the series?

c. Does participation of youth in related classroom activities affect learning?

d. Does maturity of members affect learning?

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The primary objective of the study was to assess the effectiveness of the 4-H TV Action program as an educational tool in reaching young people during non-school hours. Effectiveness was defined as the degree of participation and the resultant learning by students.

UTILIZATION OF TELEVISION IN EDUCATION

Scope

Teaching by television in the United States began on commercial stations in the late 1940's. Elementary school classrooms receiving the first televised instruction were in the Philadelphia public schools in 1948 (Gordon, 4). In 1961, an estimated 560 school districts and 117 colleges and universities were using commercial channels for regular instructional purposes (Lewis, 6, p. 6). They either purchased time from the commercial outlet or supplied the instructional broadcast to the station which aired it as a public service without cost.

The first educational television station licensed in the United States was KUHT for the University of Houston and the Houston public schools in 1953. Educational television broadcasting or open-circuit television has been increasingly used in education since that time.

One of the best known and most elaborate closed circuit facilities in the United States is in Washington County, Maryland. It began as an experiment in 1956. The experimental project ended in 1961, but television proved so valuable that the county has continued and even expanded television as an integral part of its instructional program. Today the completed system links forty-five schools to the central studios, which can send out six lessons simultaneously by cable to more than 800 TV sets throughout the county with fifty-six courses being televised (Murphy and Gross, 7).

Regarding how extensively television is used in education in the United States, Murphy and Gross (7, p. 34) cite the findings of a 1969 National Instructional Television Library survey of educational institutions.

> The survey analyzed the estimated television enrollment of 11 million as follows: about 7,500,000 in the elementary grades; a little over two million in secondary schools; a little over 600,000 in colleges and universities, and one million of undetermined grade level. In relation to actual school enrollment, the figures demonstrate that TV made its educational mark predominantly in the lower grades. The use of TV in the secondary school was not much higher proportionately than it was in higher education.

Another aspect is educational programming on commercial television, such as documentaries, drama and the arts, newscasts, and children's programs. The astute teacher is cognizant of these programs and uses them as a teaching tool by reminding students to watch them at home and then following up with classroom discussion.

A teacher's suggestion or reminder can be a motivating force for television viewing at home, particularly at the lower elementary levels. With teacher involvement in the 4-H TV Action program it was speculated that students would be more likely to participate.

School systems and other educational agencies are being pressured by an explosion of knowledge and an expanding clientele. Television both during school hours and in out-of-school time can relieve some of the pressures on the educational system. Utilizing television to its maximum potential for education purposes needs continual experimentation and appraisal.

Potential

Two advantages of television as a medium of instruction cited by a Ford Foundation report, Teaching By Television, (9) are: first, it can extend the reach of the nation's best teachers; and second, it can bring to students educational experiences quite beyond the potential of conventional means of instruction. Holmes (5, p. 261) cites these additional advantages of television.

1. Television is an electronic means of transportation with its own unique characteristics.
2. Television is a device for multiplication for instantaneous mass circulation.
3. There is an "illusion of reality" of immediancy with television which is different from that of books or film.
4. "Class consciousness", the practice of physically assembling and addressing large groups of individuals, is not necessary with television.
5. There are indications that some feedback problems can be overcome, that it is possible to build into the TV program provision for stimulus, response, and reinforcement.

Finally, Costello and Gordon (2) are concerned with helping children learn for and by themselves. Our teachers, our schools, our textbooks, our classrooms, our lesson plans, our curricula have no value of and by themselves. Television in schools or broadcast to students at home may eventually encourage independence in many youth. Considering that many boys and girls

spend more hours viewing television at home than they spend in the classroom during a year's time (Sorelle and Walker, 8) televised instruction during out-of-school time has great potential in the education process.

EVALUATION

School Cooperation and Participation

The rationale behind local school cooperation is simple. A local school is usually limited in resources. Many activities and programs that would provide excellent learning experiences for the children of a local school are not financially possible for the local school if that local school has to pay the entire costs of a specialist and his supporting services. Media such as television overcome that handicap. Television makes possible a number of experts for local schools. These experts or specialists are shared by a large number of school systems. Fixed costs for hardware items such as antennas and receivers are ammortized over a long period of time making the costs of a specialist or a specific program for a specific group of pupils financially possible for a local school system.

School officials cooperated with University Extension in the 4-H TV Action program. They were anxious for their students to participate in learning experiences about emergency preparedness.

In addition to implementation of the program in 16 western Wisconsin counties in January, 1967, the program was televised on Saturday mornings in the fall of 1967 by commercial television stations in Green Bay, Rhinelander and Wausau.

Location of the 4-H TV Action program and reported participation throughout Wisconsin for 1967 is shown in Figure 1. A total of 67,331 youth in 43 counties enrolled in this program. By enrolling we mean pupils took the initiative to secure an enrollment card. It is beyond the scope of this study to determine how many youth also watched one or more programs and did not enroll.

These enrollment figures indicate that school officials are receptive to University Extension programs for early age youth which utilize the media of commercial television.

School officials in La Crosse County, Wisconsin, desired an evaluation of the program. These officials secured the cooperation of their fourth, fifth, and sixth grade teachers and provided other assistance in executing the study. Through this cooperation, 99 classrooms and 2,473 pupils were enrolled in La Crosse County, Wisconsin.* Reference to Table I of this report reveals the distribution by grade level of the La Crosse County schools.

Table I
Participation in TV Action Programs
by La Crosse County Schools

Type of Classroom	No. of Classrooms
Grade 4	33
Grade 5	30
Grade 6	28
Grade 4 and 5	1
Grade 5 and 6	5
Grade 4, 5, and 6	2
Total	99

Student viewing. Table II divides 4-H TV Action enrollees in La Crosse County, Wisconsin, by classroom, grade and sex. A control group from Polk County, Wisconsin, was selected and is also shown in Table II. A total of 2,473 pupils in La Crosse County watched the televised programs. Boys numbered 1,264 or 51.1% while girls numbered 1,209 or 48.9%. The distribution of La Crosse County pupils by residence is shown in Table III. In general the residence category did not affect the numbers watching a particular program or the entire series. Approximately three-fourths of the pupils in each category watched the first program. The number of students who watched each program tended to decline after that. Nearly 50% of all those who watched one or more programs watched the final program.

An experimental design to measure learning. Do students who watch such television programs actually learn? To answer this question we need first to define learning. Then we need to design an experiment that will accurately assess any learning that occurs as a result of an experimental television treatment.

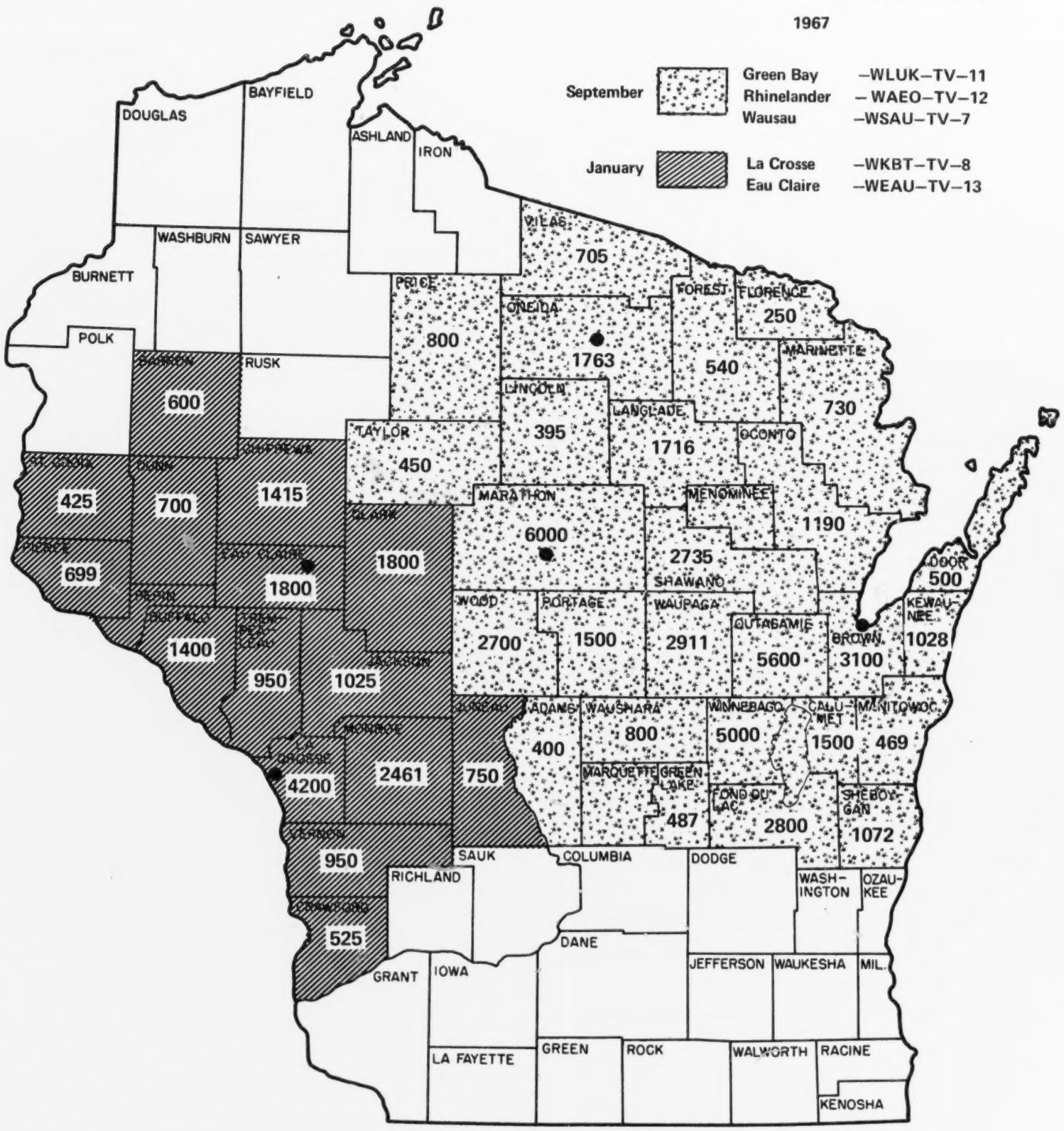
Learning is of three generalized types. Cognitive learning is the recall of recognition of knowledge and the development of intellectual abilities and skills. Affective learning includes changes in interests, attitudes, and values, and the development of appreciations. Psychomotor learning emphasizes muscular or motor skill,

*SEE: Sidney R. Bjorkman, An Assessment of 4-H TV Action Club Program, Unpublished Masters Thesis, University of Wisconsin, Madison, 1968, pp. 9, 38.

Figure 1

REPORTED 4-H TV ACTION PARTICIPATION

1967



TOTAL — 67,331

Table II
Distribution of Experimental (La Crosse County) and Control Group Subjects by Grade and Sex

		Experimental Group		Control Group	
Grade	Sex	Number	Percent	Number	Percent
Four	Boys	424	17.1	38	24.0
	Girls	420	17.0	23	14.4
Sub Totals		844	34.1	61	38.4
Five	Boys	420	17.0	18	11.3
	Girls	432	17.5	25	15.7
Sub Totals		852	34.5	43	27.0
Six	Boys	420	17.0	29	18.3
	Girls	357	14.4	26	16.3
Sub Totals		777	31.4	55	34.6
TOTALS:		2473	100.0	159	100.0

manipulation of material and objects, or an act which requires a neuromuscular coordination. We sometimes refer to the behaviors associated with these three types of learning respectively as thinking, feeling, and acting behaviors.

Our research concerned cognitive learning. That is we measured the acquisition of knowledge on the part of the students who participated in the programs.

Experimentally our design involved an experimental group and a control group, with before and after measurements for each group.* This enabled us to assess the subjects knowledge prior to the initiaion of the series. If external variables caused changes during the experimental treatment, these changes would be reflected in the post test scores of the control group. In such a manner only the post test change in the experimental group that was over and above the change of the control group was attributed to the experimental treatment.

Following the identification of the experimental and control groups, a pretest of knowledge was obtained for each group. The experimental treatment consisted of 10 TVprograms shown on a commercial television station in La Crosse, Wisconsin, at 5:00 p.m. for ten consecutive Mondays. Teachers announced the program to their classes and encouraged their pupils to watch. In addition to watching the televised programs, students could make projects and have classroom activities. The last item in the treatment-classroom activities, was controlled entirely by the respective teachers. Some discussed the programs in class the following day, had materials displayed in the classroom, etc. We could only ask at the end of the experiment the extent to which this phase of the treatment was actually provided.

Student learning. The scope of the experimental treatment is shown in Tables IV and V. As the series progressed, participation declined. For example, approximately 76% of the students watched the first program while 41% watched the

*See: Claire Selltiz, et.al., Research Methods in Social Relations, (New York: Holt, Rinehart and Winston, 1959, revised edition) p. 110.

Table III
Distribution of La Crosse County TV Action Enrollees by Residence

	Frequency	
Type of Residence	Number	Percent
City	1493	60.4
Town or Village	423	17.1
Farm	271	10.9
Country, Not Farm	271	10.9
No Response	15	.7
TOTALS	2473	100.0

Table IV
Distribution of Experimental Group Participation by Program

Program Number	Number of Subjects in Each Participation Category (N = 2473)							
	WCP[1]	WP[2]	WC[3]	W[4]	CP[5]	C[6]	P[7]	NP[8]
One	252	201	595	834	25	159	20	387
Two	165	137	621	874	21	178	16	461
Three	109	136	332	912	14	174	15	781
Four	122	139	298	840	21	190	24	839
Five	79	115	191	683	23	165	20	1197
Six	86	141	232	691	23	195	30	1075
Seven	101	211	199	892	17	114	20	919
Eight	89	153	187	625	17	147	31	1224
Nine	137	178	276	698	22	205	17	940
Ten	88	128	181	595	14	184	27	1256

1 WCP - Watched program, had classroom activities, made project
2 WP - Watched program, made project
3 WC - Watched program, had classroom activities
4 W - Watched program only
5 CP - Had classroom activity, made project
6 C - Had classroom activity only
7 P - Made project only
8 NP - No participation

Table V
Distribution of Experimental Group Subjects Watching Programs, Making Projects, and Having Classroom Activities by Program

Program Number	Number Watching Program	Number Making Project	Number Having Classroom Activity
One	1882	489	1031
Two	1817	339	985
Three	1489	274	629
Four	1399	306	631
Five	1068	237	458
Six	1150	280	536
Seven	1403	349	431
Eight	1054	290	440
Nine	1289	354	640
Ten	1022	257	467

Table VI
Knowledge Change of Experimental Group

Type of Group	Pretest Mean Score	Post Test Mean Score	Knowledge Change
Experimental Group N = 2473	10.59	13.19	+2.60
Control Group N = 159	9.88	11.03	+1.15
Experimental Group Actual Knowledge Change Attributable to the 4-H TV Action Program			+1.45

final program. However, the general level of participation was maintained after the fourth program.

Pretest and post test scores and knowledge gain values of the experimental group are shown in Table VI. Knowledge scores of the experimental group increased 2.60 as compared with an increase of 1.15 in the control group. Deducting control group change from experimental group change shows a net gain of 1.45 for the experimental group. This increase in knowledge is attributed to the effect of the experimental treatment. Thus we can say that the 2473 fourth, fifth, and sixth graders in La Crosse County, Wisconsin, did learn as a result of having participated in a program sponsored by University Extension and projected through the media of television.

Learning by Active and Passive Students: Two sub-groups of students within the experimental group were identified: a group of 535 students who participated extensively, and a group of 180 passive students. The experimental group was given an opportunity to watch 10 programs on television, make projects associated with each program (the invitation for making the projects was extended through the TV program and was also contained in their booklet) and have follow-up in their classroom if the teacher desired it. Those active students who participated extensively in the experimental treatment had some type of participation for all ten of the televised programs. The passive students had no participation in any of the 10 programs. They did take the pre and post knowledge tests. The passive group, unlike the control group, was contaminated in the sense that they had contact and exposure to the experimental group. By talking to their classmates, riding on the same school buses, etc., the passive students were bound to have seen some of the booklets, discussed something about the content of emergency preparedness and in short are likely to have learned something about the content of the programs. Any significant differences in knowledge gained between these two groups would be of major interest. Differences between the two groups such as motivation, interests, or ability were not controlled. Table VII shows the distribution of the active and passive participators by grade and sex. Note particularly that the passive group contained a disproportionate number of boys.

An analysis revealed no significant differences in the groups' pretest mean scores at the

Table VII
Distribution of Active, Passive, and Control Group Subjects by Grade and Sex

Grade and Sex	Active N = 535 Number	Passive N = 180 Number	Control N = 159 Number
Fourth Grade			
Boys	96	32	38
Girls	96	18	23
Sub-Total	192	50	61
Fifth Grade			
Boys	78	43	18
Girls	80	23	25
Sub-Total	158	66	43
Sixth Grade			
Boys	88	47	29
Girls	97	17	26
Sub-Total	185	64	55
TOTALS:			
Boys	262	122	85
Girls	273	58	74

.001 level of significance. However, a significant difference was found between the post test mean scores (.001 level). Table VIII displays a comparison of the pretest and post test scores which were significantly different (.001 level). The pretest mean of the control group was 9.88, its post test mean was 11.03, revealing a difference of 1.15. Similary the pretest and post test differences for the passive group and the active group were 1.54 and 3.80 respectively. The knowledge gain of 3.80 for the active group of participants was more than double the passive or control group knowledge change. Subtracting the knowledge gain of the control group from the knowledge gain of the active group gives the active group a knowledge gain of 2.65.

Learning by Grade in School: No significant differences in pretest scores at the .001 level of significance by grade in school was discerned for the control group, the passive participants, and active participants. Significant difference in group post test scores was found for all three grades, again at the .001 level. Significant differences in group means between pretest and post test scores were obtained at the .001 level of significance. Knowledge change of fourth and fifth grade active groups was +3.36 and +3.37 respectively while the sixth grade active group showed a knowledge change of +4.61. Actual knowledge change attributable to the TV Action program was (subtracting control group gain from the gain experienced by the other groups): fourth grade, +2.20; fifth grade, +2.63; sixth grade, +3.15.

STUDENT RESPONSE

Student Rating of Programs: Thirty-one percent of the 2473 students in La Crosse County rated the programs "very interesting" and 23% rated programs "interesting" as indicated in Table IX. Twenty-two percent rated them "somewhat interesting" and 10% said the programs were "not interesting." Eleven percent indicated they "didn't watch any" programs. Fourth graders exhibited the greatest interest in the programs. As grade level increased, interest in the programs de-

Table VIII
Analysis of Variance of Control, Active and Passive Groups
Difference Between Pretest and Post Test Scores

Type of Group	Mean Difference	Standard Deviation	Variance
Control N = 159	1.15	3.24	10.52
Passive N = 180	1.54	3.72	13.85
Active N = 535	3.80	4.03	16.26

Source	Mean Square	d.f.	F-Ratio 42.371
Between Groups	623.73	2	Significance
Within Groups	14.72	871	Level .0017

Table IX
Student Ratings of Programs by Grade and Sex

	Frequency							
	Grade Four		Grade Five		Grade Six			
Rating Categories	Boys	Girls	Boys	Girls	Boys	Girls	Total	Percent
Very Interesting	157	191	104	149	84	77	762	30.8
Interesting	84	94	95	103	89	101	566	22.9
Somewhat Interesting	69	66	91	87	109	111	533	21.6
Not Interesting	41	23	44	37	55	134	234	9.5
Didn't Watch Any	57	34	64	41	63	24	283	11.4
No Response	16	12	22	15	20	10	95	3.8
TOTAL	424	420	420	432	420	357	2473	100.0

creased. At each grade level girls reported higher interest in the programs than did boys.

Student Ratings of Membership Cards and Pins: Each student who enrolled received a membership card and pin. In rating each of these two items, student ratings followed the ratings of the programs. Membership cards and pins were "very nice" in the opinion of nearly all fourth graders and "terrible" in the opinion of many sixth graders. Girls rated the two items higher than did boys. Sixty-nine percent of the girls and 62% of the boys reported wearing the membership pins.

TEACHER RESPONSE

An evaluation instrument was administered to teachers in six Wisconsin counties. Completed questionnaires were received from 175 teachers, a 55% response. These data are shown in Table X.

Teacher Opinions of Content: Nearly all teachers thought the content of the 4-H TV Action program was either excellent or good. Teachers checking each response were about equally divided between excellent and good. There was considerable range among counties, especially Jackson and Vernon Counties in which 70% and 33% respectively of the respondents indicated the subject matter content was excellent.

Teacher Opinions of Student Interest: Teachers were asked to indicate their observations of student interest in TV Action. Responses received from the 175 teachers to the 6 item scale numbered 186, indicating that some teachers made a multiple response.

As shown in Table XI, teacher perception of student interest varied greatly. The dominant student interest pattern perceived was high student interest at the start of the series with a slight decline as the series progressed. Eighty-four (45%) of the responses were of this category. The next highest interest pattern, very high interest throughout the series, was given in 34 (18%) of the 186 responses. Only 7% of the responses were assigned to the pattern of very low interests throughout the series. The 4-H TV Action series, in the opinion of teachers, had high interest for students.

Teachers and Classroom Activity: Teachers' use of class time for activities related to TV action programs was ascertained and reported in Table XII. Six categories of activity were included in the questionnaire and teachers were asked to check all of the activities that they did in the classroom as a follow-up to the 4-H TV Action series. Most teachers did more than one type of follow-up activity--the 175 teachers reported 241 activities. Class discussion was teachers' major activity. Sixty-two percent of the activity was of this type. Having students make posters was next most popular but comprised only 18% of the activity. Demonstrations, projects, reports and movies were reported infrequently.

Further analysis of the data revealed that teachers who indicated increased interest as the series progressed usually devoted considerable class time to activities related to TV Action; rated the content excellent, and a rather high proportion (over three fourths) of their students were TV Action members. Several teachers indicated

Table X
Teachers' General Impression of TV Action Content

	Counties						
	Crawford	Jackson	Pierce	Monroe	Vernon	Clark	Total
General Impression	(Percent)	(Percent)	(Percent)	(Percent)	(Percent)	(Percent)	(Percent)
Excellent	47	70	38	53	33	40	46
Good	53	25	50	47	61	60	50
Fair	0	0	4	0	6	0	2
Poor	0	0	0	0	0	0	0
No Answer	0	5	8	0	0	0	2
Total Percent	100	100	100	100	100	100	100
No. of Teachers	17	20	24	47	33	34	175

Table XI
Teacher's Perception of Student Interest Patterns in TV Action

Interest Pattern	Counties						
	Crawford	Jackson	Pierce	Monroe	Vernon	Clark	Total
	Frequency of Response						
Very high interest throughout the series	4	7	5	13	1	4	34
Interest high at the start but decreased some as series progressed	0	10	12	23	25	14	84
Interest high at start but decreased sharply as the series progressed	8	0	3	6	0	8	25
Very low interest throughout the series	3	3	1	0	1	5	13
Interest increased as the series progressed	6	2	0	5	5	5	23
Do not know	2	0	3	0	1	3	7
No. of Responses	23	22	24	47	33	39	186

Table XII
Classroom Activities Provided Related to TV Action

Activities	Frequency of Activity
Discussion	149
Demonstration	17
Posters	43
Projects	14
Other (reports, movies)	15
None	3
	241

they would have devoted more class time for related activities if they had known of the series further in advance.

Teachers and Discussion Guides: A teacher discussion guide included questions and suggested references for use in classroom follow-up. Approximately 80% of the respondents indicated they used the guides. This compares to 85% of the teachers who held classroom discussion related to TV Action.

Several favorable comments were given regarding the discussion guides, i.e. - "helpful when teacher has not seen program;" "means of motivation before the program was seen;" and "very helpful to initiate discussion."

General Comments and Recommendations from Teachers:

- Most suitable to grades 3 and 4
- Prefer later hour in day or Saturday morning
- Prefer showing during school time
- Conflict with chores, sports, paper routes, bus, other youth organization meetings, teachers not home
- Allow more advance time for promotion and preparation before series begins
- TV reception was poor

Teacher Interest in Other TV Series: Teachers were asked if they would utilize additional TV Action series in their instructional program as they plan learning experiences for their students. Of the 175, 90% indicated "Yes", 3% said "No" and the remaining 7% did not respond to the question.

Suggestions of subject matter areas desired for TV Action were requested from teachers. Those areas mentioned most often were: General science, conservation, natural resources, local government, and safety.

ASSESSMENT BY UNIVERSITY EXTENSION PERSONNEL

Clark County 4-H Agent

"Every school but one in Clark County participated in the TV Action program. Of particular interest is that 100% of the teachers stated that if another educational 4-H TV series were available they would encourage students to participate. An evaluation of TV Action by 116 youth in two school systems was conducted. The respondents indicated an average of 73% of the students viewed each program. The range was 66% on program No. 8 to 77% on program No. 2."

Jackson County 4-H Agent

"We've received many encouraging reports such as, assembling first aid kits, stocking emergency shelters, constructing fire extinguishers, making posters for school and home, presenting demonstrations at school and club meetings, practicing first aid procedures, and many other items covered in the series."

"School administrators and teachers have commented on the great amount of enthusiasm shown by students. One principal stated that he thought the parents were learning as much as his students. At least 50% of our teachers of the grades concerned discussed some of the programs in the classroom and tied the series into school curriculum."

Pepin County, where about 500 youth enrolled in TV Action

"Several people have commented about other members of the family viewing the series. As an indication of the acceptance, two Girl Scout Troops in Durand changed their meeting from Monday afternoons to Tuesdays in order to watch this series. Churches in Durand publicized the series in their Sunday church bulletins. These are examples of how cooperation was extended by organizations to promote this series.

In Vernon County, Robert Fredrick, 4-H Agent, conducted an evaluation among parents of TV Action members. The data showed that 59% watched some of the programs and 34% watched most of them. Ninety-four percent were interested in a similar type TV program of a different subject for next year. Greatest interest was expressed in conservation and general science. When asked to rate the value of the series for their children, 53% and 41% indicated "very valuable" and "some value", respectively.

In Buffalo County, Albert Frankenstein conducted pre and post testing of 450 TV Action members in the Mondovi school system to determine whether a change in knowledge about emergency preparedness occurred. An instrument developed by Bjorkman was used. On the pretest, 10.7 questions were answered correctly, compared to 14.7 on the post test, or a gain of 4.0 questions.

CONCLUSIONS

- Television can be used effectively by University Extension to teach early age youth during their "non-school" time.
- Upper elementary age youth will watch and learn from televised educational programs.
- The 4-H TV Action series appeals to all three grade levels, however, youth in grade four tend to respond more favorably to the program than do those of grades five and six. The older age youth, however, do learn more.
- Classroom activities tend to increase learning.
- Teachers respond favorably to educational programs broadcast by commercial television stations.
- The majority of the students found this televised program of interest.
- A series of televised programs dealing with related subject matter will be received by teachers.
- Student interest is likely to decline slightly during a ten week televised program.
- Class discussion will likely be the dominant follow-up activity used by the teachers.
- If similar televised programs were offered teachers would utilize them.
- University Extension personnel find the televised programs a new and excellent way to program for youth clientele groups.

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